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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,319	12/04/2003	Tung-Ming Su	REAP0038USA	1318

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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION  
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EXAMINER

NATNAEL, PAULOS M

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/707,319

Applicant(s)

SU, TUNG-MING

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,8-13 and 16-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,5,8-13,16-20,25 and 26 is/are allowed.
- 6) ☒ Claim(s) 21-24,27,30 and 31 is/are rejected.
- 7) ☒ Claim(s) 28,29 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/21/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **21-24** are rejected under 35 U.S.C. 102(b) as being anticipated by Rotzoll, **5,737,035**.

Considering claim **21**, Rotzoll discloses (fig.5) RF-IF conversion circuit comprising mixer mix1 408, oscillator 450, and in Fig.6, the details of circuit 410 comprising an input from the mix1 408 to Mixer 610, converting the IF signal into an in-phase signal, and the mixer 612 converting the received IF signal into quadrature signal. As to the claimed “wherein the IF signal has a desired channel in the received RF signal according to the center frequency of the bandwidth of the band-pass filter”, Rotzoll discloses that the television receiver wherein said third filter has a center frequency of 15.5 Megahertz and a bandwidth of 300 Kilohertz. Col. 29, lines 18-20.

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Regarding claims **22 and 23**, Rotzoll discloses the phase splitter 611 outputting oscillating signals shifted by 90 degrees.

Considering claim **24**, Rotzoll discloses that the output of first local oscillator (LO1) 450, operating between 1200 and 2100 MHz, is mixed in first mixer (MIX1) 408 with the RF signal to generate a first IF video carrier frequency of 1200 MHz. This approach leads to minimum distortion due to mixer images and harmonic mixing. The first IF is crudely filtered by the bandwidth limitation of first mixer 408 to minimize harmonic effects." Col. 8, lines 52-58).

3. Claims **27,30,31** are rejected under 35 U.S.C. 102(b) as being anticipated by Birleson 5,847,612.

Considering claim **27**, Birleson discloses an interference free broadband television tuner comprising the conversion circuit illustrated in Fig.1, disclosing a mixer 102 coupled to a received RF signal, a first local oscillator LO1, a band-pass filter 103 coupled to the first mixer for filtering the intermediate frequency, and another mixer 104 coupled to the band-pass filter 103, for converting the filtered intermediate frequency signal to a baseband signal. Finally, Birleson discloses that received RF signal is 55MHz-806MHz wide, a range of over 700MHz, while the LO1, as illustrated in Figs. 3B and 3C, has a lower frequency of 1018.5 and a higher frequency of 1160.25MHz, a range of 141.75

MHz, meeting the claimed that the oscillating signal is narrower than the frequency range of the received RF signal.

As to claim **30**, Birleson discloses the frequency of LO1 is variable, as is well known in the art, and will be selected bases upon the channel in the RF signal that is being tuned. (col. 3, lines 50+)

As to claim **31**, Birleson discloses RF frequency range of 55MHz-806MHz and different ranges of LO1 as illustrated on Table/Fig.4.

#### ***Allowable Subject Matter***

- 4.** Claims **1-2,5,8-13,16-20, 25-26** are allowed.
- 5.** Claims **28-29 and 32** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

- 6.** Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

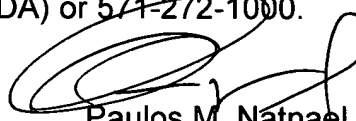
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Paulos M. Natnael  
Primary Examiner  
Art Unit 2622

September 25, 2006